The Maria Mitchell House, Nantucket, Mass.

FROM AN EARLY PHOTOGRAPH

Old-Time New England

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The Maria Mitchell House and Memorial, Nantucket, Mass.

By Lydia S. Hinchman

On the northerly side of Vestal Street in the town of Nantucket, about two blocks from the Soldiers' Monument, stands a house built in 1790. Originally it was a square house much like others built on the island at that time, with a chimney somewhat off centre providing each floor with three fireplaces. The front door opens into a small entry, with passage directly ahead to what was originally the kitchen, main stairs at the left of the passage, entry closet at the left, and door to the parlor at the right. The parlor having two front windows accounts for the door and three windows which on the first floor make up the facade of so many Nantucket houses, the odd window lighting the entry closet. Throwing the closet into the entry for the sake of the extra light and space is one of the commonest alterations to which this type of Nantucket house is subject. The change in this house probably antedated the William Mitchell ownership. Alterations were usually mentioned and discussed, and there survives no recollection or tradition of such relating to the entry closet. The evidence that there was a change is found in the presence of a narrow board replacing the former threshold. In the resulting recess at the window end of the altered closet, is seen a bust of Maria Mitchell, done in plaster, the original of which by Miss Emma F. Brigham is in the niche on the facade of the observatory at Vassar College. For many years and as recently as the eighteen-sixties one of the uses of the reduced closet was to house the Sunday bonnets.

The parlor has the greatest amount of elaboration to be found in the house, and little enough of that, simple paneling from floor to ceiling the length of the fireplace wall, solid two-fold hinged inside window-shutters (a later addition), a strip of low wainscot on the fireplace end of the entry wall, and a mahogany mantel shelf salvaged from the Phoenix bank and cut down about four inches at one end to fit the present location. The room behind the parlor, and connected with it by a "passway" and "passway closet" backing onto the chimney, was used as a bed room and is very simple. The other back room,

The Side Entrance, Maria Mitchell House

beyond the front hall, was originally the kitchen. It still has the large fireplace with the remains of the inevitable brick oven, and across the north end of the room in a space outlined by the change in direction of the floorboards was originally the "sink-room," as it was called, where the dishes were washed. The back stairway to the second floor, extending to the entry closet and between the main stairway and the outer wall of the house, led directly from this kitchen, while beside it and under the front stairs, descend the cellar stairs. The second floor, similar in plan to the first, has three bed rooms, entry with stairs to first floor, and over them stairs to the garret. Beside the garret stairs is the door to a clothes press where were formerly the back stairs.* Off the front end of the hall between the front wall and the clothes press is a tiny closet lighted by a window, a cosy niche where Maria Mitchell often devoted herself to her studies.

Throughout the house the old hinges are mostly of the H or H L type, with strap hinges on front and back doors. The principal parlor lock is a brass rim lock, the other rim locks being of iron, and doors of least consequence having wood and metal, or all wooden latches. The long wooden latch on the front door with brass handle, thumb piece and escutcheon, was a common feature of old Nantucket, but by no means was it always, as in this case, of mahogany with mahogany wedge. In this particular case the mahogany was washed ashore from the British ship "Queen,"

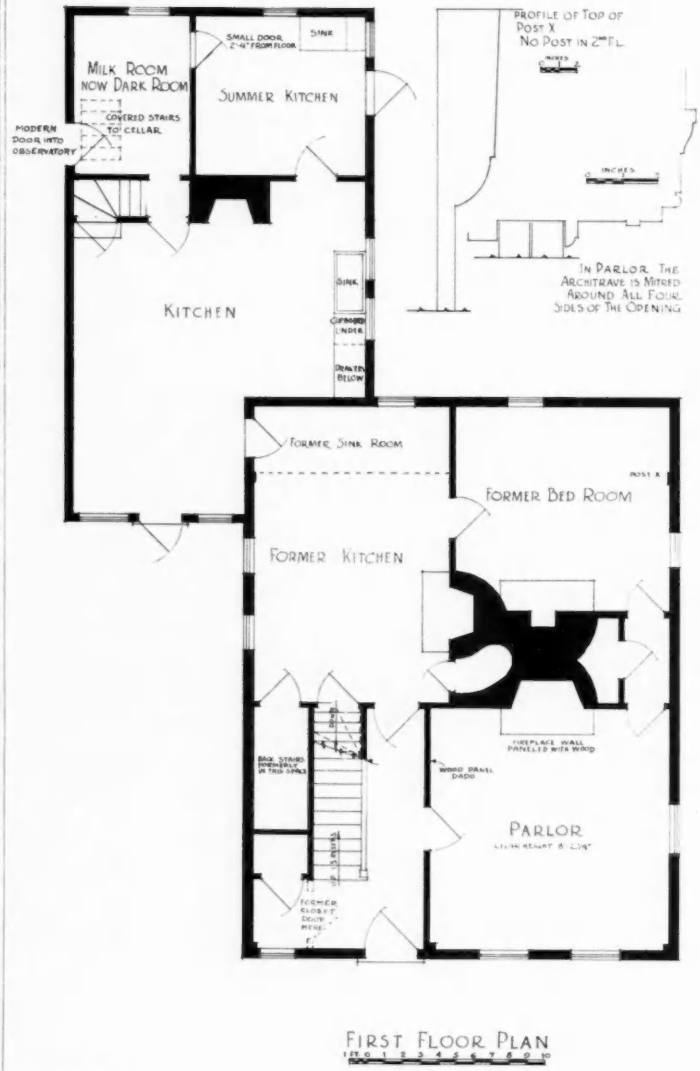
*The door in the second floor entry at the head of the old back stairs (where is now the clothes press) is a later addition. It has butt hinges, and a quarter round on the edge of the architrave, a feature found in no other doorway.

Maria Mitchell's Study

wrecked off Nantucket in the early part of the nineteenth century.

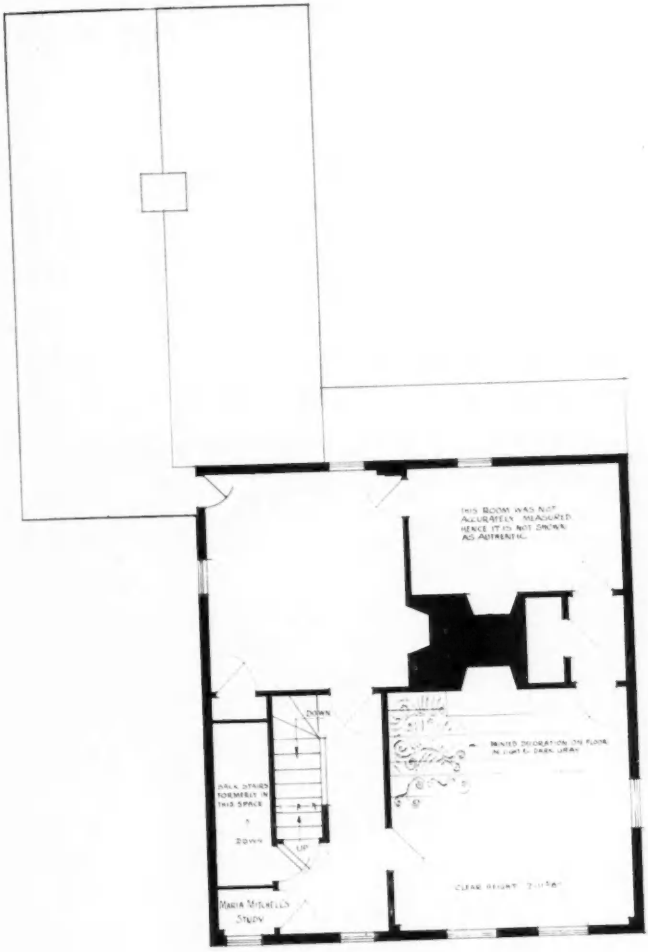
The floor boards on each floor show squash color under the later paint and this was doubtless their original color. How the wood trim was originally painted cannot be easily determined. The front stair treads show red where the present paint is worn through. The exterior of the house is now painted grey, with a pleasing effect which shows the wisdom in the case of these old houses of not picking out the window and door frames in white or some other contrasting color.

Not only has the original kitchen fireplace a crane, but the parlor fireplace and the front and west second floor bed room fireplaces contain irons



THE MARIA MITCHELL HOUSE NO 1 VESTAL STREET NANTUCKET MASS

M.B. GREENE DEL. 1925


THIS ROOM WAS NOT ACCURATELY MEASURED HENCE IT IS NOT SHOWN AS AUTHENTIC.
DOWN
WALL STAIRS FORMERLY IN THIS SPACE
DOWN
UP
MARIA MITCHELL'S STUDY
PAINTED DECORATION ON FLOOR IN LIGHT & DARK GRAY
CLEAR RIGHT

SECOND FLOOR PLAN

THE MARIA MITCHELL HOUSE NO 1 VESTAL ST. NANTUCKET MASS.

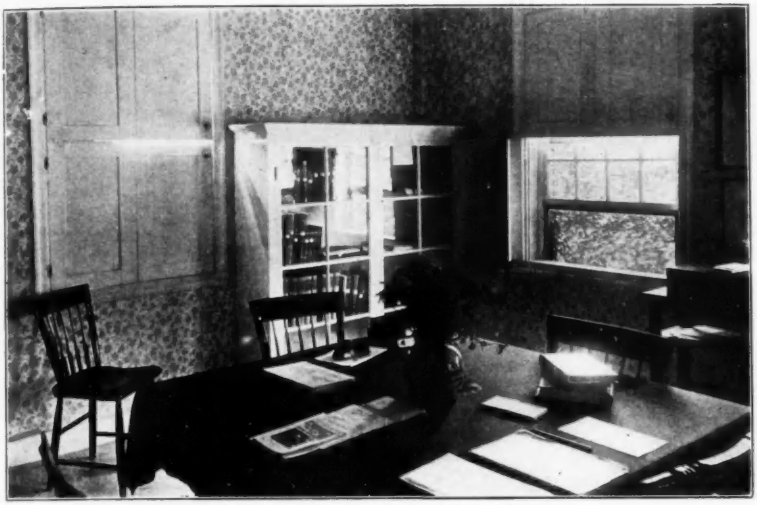
M.B. COLLINS DEC. 1925

The Former Parlor, Maria Mitchell House

for cranes. Whether the first floor bed room and the one over it have them is unknown. That on the first floor was either built for an iron grate, or more likely was later altered to hold one, and the fireplace in the room above seems to have been reduced in size.

This house, built in 1790 by Hezekiah Swain and his brother, came into the possession of the Mitchell family in 1816, when Aaron Mitchell purchased it of Simeon Gardner. In January, 1818, he sold it to his cousin William Mitchell, whose daughter Maria was born in the house August first of the same year. William Mitchell was a teacher and self-taught astronomer and meteorologist. It was he who added to the house an ell containing a larger kitchen and a new back stairway. He then removed the back stairs above described as leading from the kitchen, and in their place built a clothes-press on the second floor and on the first floor the long china-closet. The old kitchen he transformed into a living or dining room, removing the sink to the new kitchen.

In the new kitchen as formerly in the old, was a fireplace furnished with crane, pot hooks and trammels. One of the oldest members of Maria Mitchell's generation distinctly recalls that when she was very young, meals during the spring and autumn were prepared over the open fire. Baking was accomplished by means of a covered cast iron pan hung low on one of the pot hooks. The cover had a channel just inside its circumference where hot coals (embers) were placed to brown the bread or cakes. The first modern "improvement" which crept in was a sheet-iron fireboard over the fireplace in winter and a cook stove standing out into the room. At the east end of the fireplace occupying the space between the chimney and the back door, was an arch,



The Former Parlor, Maria Mitchell House

so-called. This was a built-in boiler. The outside described an arc of a circle, and the sunken boiler, a large affair, was so connected with the fireplace that the weekly wash was boiled there. It was removed about seventy years ago. Between the new stairway and chimney was built a small square closet with shelves on one side, which served for a pantry.

In 1838 William Mitchell sold the property to his brother, Peleg Mitchell, Jr., who about 1850 built an addition extending from west to east on the north side of the kitchen. This contains a larger pantry (called the milk room) entered from under the kitchen garret stairs through the old pantry which accordingly has become a "passway." This new pantry is lighted by a window, and a small slide door connects it with the somewhat crude outside or summer kitchen. The cellar under the new pantry and summer kitchen, used for provisions, is circular in shape and built of brick. The only cellar previous to this time, under the front entry and stairs, was used for wood and coal. This first cellar under the southwest corner of the house, has two stone outer walls, and a brick semi-circular interior wall to the north and east.

The graining still on the kitchen walls is said, by one qualified to judge, to be "one of the most successful and best known examples in New England of this kind of work, a joy to behold, setting a standard for future painters to emulate." The color scheme is purple-pink in various shades covering all four walls, from floor to ceiling, passing over doors, mantelpiece and all plaster and wood work, and even over the pump. It extends over the steps and skirting board or base of the garret stairs as far as these are visible from the kitchen, from which point up the

Kitchen, Maria Mitchell House, now used as a Sitting Room

risers only are painted, and the purple color is discarded in favor of brown. It was probably William Mitchell who was responsible for this graining, for he built the kitchen and had to give the walls treatment of some kind. True, he was a Quaker, but so was his brother Peleg, and the latter was so markedly unostentatious both as to garb and house furnishing that this graining decoration can properly be attributed to William only, making the date sometime between 1818 and 1838. Peleg Mitchell's connection with this graining was almost certainly limited to copying it in the summer kitchen which he built (and where the graining is noticeably inferior to that in the large kitchen) and possibly applying it to such alterations or additions, if any, as he may have been responsible for in the large kitchen.

The elaborate painting of the floors throughout the main house was done after the removal of the sink room and change in the back stairs. The color scheme is grey, with blue-black lines, etc., sometimes covering the whole floor, and sometimes evidently intended merely as a border around a rug or carpet. The present staircase color, white with a centre strip of green spattered white, is modern.

In this house, at the age of twelve and a half, Maria Mitchell began her astronomical observations, counting the seconds for her father. Her brother, Henry Mitchell, referring to the eclipse of 1831, says:

> It was this annular eclipse described in the next year's American Almanac as a splendid spectacle, beautiful and sublime, that first called in the services of Maria Mitchell, . . . These observations of the eclipse made in concurrence with those of Paine at Monomy and Bond at Dorchester, had for practical object the deter-

Kitchen, Maria Mitchell House, now used as a Sitting Room

mination of the longitude of the house in Vestal Street, where the chronometers of the whaleships were rated and set to Greenwich time. Mr. Mitchell came in time to be the rater of all chronometers of a fleet of ninety-two whaleships, requiring observations on every fine day of the year. We mention this to indicate how accustomed his daughter must have been to the talk of astronomy even as the source, in part, of her daily bread.

Mr. Mitchell devoted much time to meteorological and astronomical calculations for the Federal Government not only here but also at his later residences, which work his daughter shared and continued for many years. "The walk," on top of the house, lent itself to such purposes. William Mitchell filled many positions which brought him into touch with men of importance. He was at one time Chairman of the Harvard Observatory Committee, and for a long time one of the Overseers of Harvard College, a member also of the Massachusetts Senate, and one of Governor Briggs's Council. His associations were with the brilliant minds of his time.

So closely associated was the house with astronomy that in 1902 the idea of preserving it as a memorial to Maria Mitchell was received with much interest. The Nantucket Maria Mitchell Association was formed, and chartered in 1903.

The first purpose of this Association was to preserve the birthplace of Maria Mitchell. Yet she was so alive to effort along scientific lines, and so interested in the advancement of women in science, that an inactive Memorial, with its only purpose the housing of such Mitchelliana as could be collected, seemed inadequate. The founders therefore early provided for activity and accomplishment, and the

Maria Mitchell
1818-1889

FROM A PHOTOGRAPH BY SARONY

little group of buildings, which today interests many visitors, is the best evidence that their intent is being realized.

Active work was set in motion in 1904 by the first Curator, Mrs. Mary A. Albertson, a member of the Mitchell family, who ably formulated and for ten years carried on the work as no one else could have done, much of the time wholly as a labor of love. Her daughter succeeded her and has continued to develop the plans so well begun.

The telescope presented to Miss Mitchell in 1858, through Miss Elizabeth Peabody "on behalf of the women of America," became by gift in 1907 the property of the Association. This historical telescope seemed to demand fireproof installation, and by further generosity the Association was enabled, on July 15, 1908, to dedicate the Astronomical Observatory. In the

The Maria Mitchell Memorial House, Vestal Street, Nantucket, Mass.

dedicatory address, a then recent graduate of Vassar College said:

> Acquiring prestige as one of the first discoverers of Halley's comet on its return in 1835, Mr. Mitchell was able to raise his place of observation to the rank of an Observatory. Today's event in dedicating this Vestal Street house as an Astronomical Observatory merely restores its honors.

In 1912 by the creation of a Fellowship earnest work in the Observatory was begun. The first Fellow appointed that year became in 1916 Director of the Observatory.

Within a few years other buildings were added to the memorial group. In 1920 the Scientific Library building was dedicated and opened for free use. This building is a restoration and adaptation of an old school house in which, considerably prior to 1837, William Mitchell taught. Since it was directly opposite to his Vestal Street home, it seemed fitting that it should be purchased and adapted to library needs. Attempts to find the exact date of the building have been so far without success. It may be of interest to state here that in it, early in the "Forties," the Millerites held their meetings. In 1922 there was added to the Observatory a study and class room provided with an observing deck where by appointment with the Director two small telescopes are available for students and others interested. Early in the summer of 1924 a small new building on adjoining property was rented for the use of research students and classes in Natural Science.

With all this activity the constant care and preservation of the Memorial House is not for one moment lost sight

The Maria Mitchell Memorial House, showing the "Walk"

of. In 1924 many new window frames were provided. Effort is made to protect by rugs the quaint painting on the old wide floor boards, since restoration of this feature is next to impossible. The Association every year sets aside for the Preservation Fund any balance in income account.

The present use of the rooms differs of course from that in Maria Mitchell's childhood. The parlor is now the reception room and contains a bookcase added by the Association in 1904 which was more than sufficient for the nucleus of the library at that time. Now there are in it various objects that belonged to Maria Mitchell or her family, such as pictures and other Mitchelliana.

In the former bed room just back of the parlor and separated from it as stated above by a "passway" and "passway closet" are to be seen natural science specimens. The Herbarium is there, as well as the fossils of Sankaty Head, and other things native to Nantucket. The early kitchen, later the "sitting room," afterwards known as the "dining room," contains additional specimens of the Natural Science Department. The beautifully grained later kitchen in the ell is used as a sitting room for the caretakers. The writer knows of no room in Nantucket so well calculated to help visitors mentally to span the better part of one hundred years than the sight of this truly remarkable room. Upstairs two of the rooms are still devoted to their intended uses, namely, bed rooms. That in the front of the house, with the beautifully "feather"-painted floor is, however, used as a "period room"; furnished approxi-

mately as a bed room of Maria Mitchell's time.

The garret, formerly such a wonderful store room for Mr. Mitchell's homemade diagrams and other material used in astronomical teaching, is still used as a store room in such a way as more or less to continue its former appearance. Here are found the stairs leading to the "walk." It may be of interest to note that the original "walk" was destroyed in the September gale of 1855 and not rebuilt. In 1915, however, it was decided to replace this as being necessary to give the house its former appearance. For the details of the design recourse was had to the recollection of one of the family. The name "Captain's walk" the writer never heard used until recent years. It was not in use in this particular house in the olden days, "the walk" being the only name employed.

In closing this brief sketch the writer wishes to express her appreciation of assistance given by the Corresponding Secretary of the Society for the Preservation of New England Antiquities. He has, on the spot, verified facts which years of absence from the Island had made dim to the writer, and with his knowledge of important features in old buildings has called attention to interesting points in our own, which otherwise would have been omitted from this article.

The Front Door

Ancient Carpenters' Tools, Part IV

By Henry C. Mercer, D.Sc.

Tools for Surfacing, Chopping and Paring (Continued)

THESE very peculiar looking, little one-hand axes or hatchets are shown in their early, long-bitted form as

Axe Hatchets of European Type
(Fig. 87)

and in their later, short-bitted American shape, as

Axe Hatchets of American Type
(Fig. 88)

Though adapted to rough and ready household use, they all lack the specialized hammer poll and nail pull. If the carpenter used them at all, he must have done so for hacking and pounding. If for shingling and lathing, he must have carried a claw hammer with him to draw, when necessary, the ill-driven, wrought nails which were too valuable to waste.

Another once famous surfacing and hewing tool, now out of use among carpenters and passing away (1925) with the cooper and shipwright, is the very ancient

Adze (Fig. 89)

the *Ascia* of the Romans, brought to America by the pioneers (*cf.* Essex Co., Mass. Court Records, 1635-86), home-made until *c.* 1840, and still (1925) surviving as a factory-made instrument. It was a two-hand, long bladed, hoe-shaped axe, with a bit generally down-curved, rarely flat-topped, bladed at right angles to its straight, deep-hafted helve (handle), and which, because basilled on the inner bit curve, had to be unhafted for grindstone sharpening. Hence, its very large eye, sometimes rectangular, is slightly funnel-shaped, as in the pick-axe, so that the helve can be driven out upward.

The tool, though part of the equipment of the carpenter, was far more generally and conspicuously used by the shipwright, a fact which helps to explain the striking variations in its form, as first, with a very peculiar, peg-shaped hammer poll; second, with a heavy, rectangular block-poll; and third, with no poll at all.

As if no other type of adze existed, the peg-poll variety is alone illustrated in the *Circle of Mechanical Arts*, 1813; by Holtzapffel, 1846; in Knight's *American Mechanical Dictionary*, 1878; and in Webster's *Dictionary*, 1891. But neither Moxon nor Diderot show it, and the writer has thus far failed to find it in the background of any pre-17th century pictures or woodcuts. But whatever its history and date, it had become a very important shipyard tool in the 18th century, and has continued so until now (1925), when the building of the wooden ship in England and America nears its end.

According to the information of Mr. Israel Snow, shipbuilder, of Rockland, Maine (August, 1925), gangs of workmen called "Dubbers," standing upon scaffolds nailed or spiked against the open ship framework, adzed down the latter to proper level and contour, for receiving the inside and outside ship's planking, which latter, called the

Fig. 87. — Axe Hatchets of European Type

These diminutive, one-hand, chopping and pounding tools, found as farm relics in eastern Pennsylvania and Massachusetts, resemble the long-bitted, short-polled, European tree-felling axes previously described (see Fig. 4). All are home-made and differ greatly in contour from the shingling and lathing hatchets already described. None show devices for pulling or driving nails, but all, with rectangular flat polls, are meant to rough-pound as well as to cut. About one-half the size of the tree-felling axe, they were probably used less by the carpenters than for domestic purposes. The handles appear as found, but are probably not original. No. 8545 is smith stamped, and was bought with its handle from Franklin Bigelow, Fall River, Mass., in 1897.

"skin," had to be again adze-levelled, before the joiners planed it to a finish. Because in this process, nails whole or broken, often remained in the ship's ribs, after the aforesaid scaffolds were wrenched off, and because these nails, etc., not easily pulled out, had to be driven in by the "Dubber," the small peg poll, which in hammering the hostile projections followed them below adze-level into the wood, so as to clear his adze blade, became a highly efficient feature of the instrument.

For this special purpose the block poll adze would not serve, but otherwise, the latter tool, here shown (Fig. 89) was used, according to Mr. Snow, by shipwrights, not only to hew, but to drive spikes, in marine railways, and to spike and hew timber work. Further than this, the evidence of the photographs here reproduced and also of collected specimens, abundantly shows that not only the shipwright but the common carpenter, in the early 19th century, used both the first and second forms of the great marine instrument when, as described by Moxon, he

adzed away projections in vertical house framework or levelled hand-hewn floor rafters before flooring. But he dressed his loose logs with the broad axe and not with the adze, and we find that as sawed house rafters came more and more into use, he more and more confined his adze operations to the overflooring of sagged or rotted house floors, or to the levelling for floors, of hand-hewn rafters in barns. The blades of the two above noted adzes (here illustrated) thus used by him and as found by the writer, are, as a rule, not saucered as is often supposed, but flat, and their concealed work rarely appears in old houses. The cuts at right angles to the grain that we sometimes see on the sides of rafters in barns and house lofts, etc., are the make-ready scorings-in of the felling axe above referred to, and not of the broad axe, much less of the adze, and whoever confuses them with the work of the latter tool is as mistaken as he who applies the name adze to both instruments. According to Cescinsky, we must go back to old furniture of the 16th century to see the work of the adze, otherwise we may look for it in the unplanked bilge troughs in the holds of wooden ships, where the ship carpenter last used the tool.

Besides this use of the adze among shipwrights and carpenters, abundant further evidence shows that in the new forest environment of the Anglo-American Colonies, the employment of the tool was greatly extended among farmers to excavate the

Log Troughs (Fig. 90)

for feeding or watering horses, cows, chickens, etc., and also

The Dugout Canoe (Fig. 91)

Fig. 88
Axe Hatchets of American Type

In this group of little old one-hand tools in which the poll outweighs or nearly outweighs the bit, we see half-sized variations of the American tree-felling axe. (See Fig. 6.) The three left-hand specimens, if not the others, were made by local blacksmiths in Bucks Co., Pa., before 1840. They were used for various purposes on the farm, such as brush and kindling cutting, etc. If by the carpenter, not probably for shingling or lathing, since they lack the nail pull and modified nailing poll. The handle of the right specimen is not original. No. 13356, given by Mathias Hall, in 1918, is a farm relic of the old Hampton family, of Bucks Co., Pa.

Then the need for pounding nails out of adze-reach, or driving spikes, no longer existed and we find adzes of irregular home-made form, sometimes two-handed, of the third class mentioned with no poll at all, or sometimes for excavating large bread troughs, bowls, etc., of the small, single-handed type, here shown as the

Cooper's Adze (Fig. 92)

It is this latter tool, thus used, that often shows the saucered blade sometimes erroneously supposed to be

Fig. 89.— The Carpenter's Adze

These old, home-made, two-hand instruments vary considerably in the shape of (*a*) the *bit* set at right angles to the handle, generally single, but sometimes (not here shown) double, generally curved toward the handle, but sometimes straight; (*b*) the *cutting edge*, always basilled on the lower (inner) side, generally flat, but sometimes very slightly saucered; (*c*) the *eye*, generally wedge-shaped, funneling upward inside for handle release, as with the grubbing hoe or pick, but sometimes straight-sided inside, and hence with fixed handle (No. 6841 and No. 10707); (*d*) the *poll*, sometimes peg-shaped (four specimens to right) and sometimes a heavy rectangular block face; sometimes (not here shown) polless.

As illustrated by these specimens the evidence shows that this celebrated tool, though sometimes saucer-bladed, by no means always cut a rippled surface; that the handle was not always releasable, for grindstone sharpening, as Moxon describes it; that when not free of its handle, it must be sharpened either on the side of the grindstone, or, particularly if saucered, with a whetstone.

The four right-hand specimens with their noticeable rectangular eye, wedge-shaped inside, for upward handle release, and still more noticeable peg-shaped poll, represent a conspicuous if not ancient type of the instrument, which neither Moxon (1678) nor Diderot (1768) show. But the *Circle of Mechanical Arts*, 1813; Holtzapffel, 1846; Knight's *Mechanical Dictionary*, 1878; and Webster, 1891; illustrate this particular shape as the adze *par excellence*. No. 7583 was bought at York Harbor, Maine, in 1898 and another, not shown, of J. & W. R. Wing, ship owners of New Bedford, Mass., among the carpenter's tools of one of their whale ships; and the evidence indicates, if it does not prove, that the type was developed in the 18th century, probably in England, among ship's carpenters, who chiefly used the adze.

As noted in the text, Mr. Israel Snow, ship-builder, of Rockland, Maine, informs the writer (August, 1925) that adzes are thus peg-polled and continually used at shipyards to drive down-broken nails, spikes, etc., in the ship's timbers, so as to clear the adze blade when adzing the ship's framework for inner and outer planking. He also says that some of the shipyard adzes, called "line adzes," preceding the flat-bladed adzes, in rough-hewing sections of the framework called "lines," are saucer-bladed. Also that "the saucer or gouge" adze is used in cutting the waterways under the floor timbers, down near the keel of vessels, in what is called the "limbers."

Fig. 90.— Log Troughs

In these comparatively small specimens of a very large class of home-made troughs, used on farms until the late 19th century, to feed and water fowls and animals, axe-cut sections of logs, often left unfinished on the outside, have been, according to the information (1925) of farmers, excavated on the inside, downwards, with the adze, and sometimes retouched on the inner sides and ends with the felling axe.

characteristic of all adzes but which, as noted, rarely appears on the large standardized instrument of the shipwright and carpenter; and it is this saucered blade which ripples the wooden surface of the board trough, bowl or canoe with a pleasing sheen of faint light and shadow compared with which the long, side shave of the broad axe and the drag of the plane and saw, are monotonous, so much so, that the modern architect now (1925), as did Mrs. J. L. Gardner at "Fenway Court" in Boston, sometimes deliberately orders his machine-made board and beam to be resurfaced "for Art's sake," in a deliberate manner unknown to the old-time carpenter, with saucered varieties of the once famous tool.

As of great historical and ethnological interest, the next illustration shows

THE KOREAN ADZE (Fig. 93)

used from time immemorial in the Far East, and bought from a carpenter at Kang Kei, Korea, in 1923. It is described under the illustration.

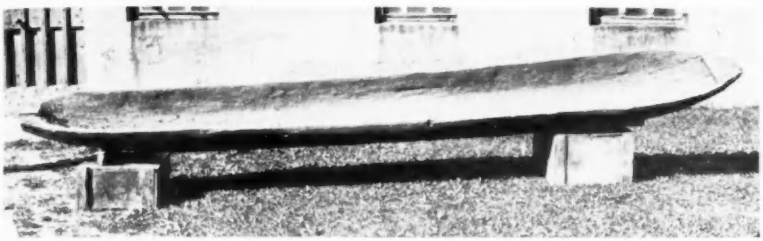


Fig. 91.—Dugout Canoe

Made by excavating a cypress log with an adze, probably helped on the inner and outer sides with a felling axe. Found by Wm. H. Labs, Assistant Curator, in 1920, for the Bucks County Historical Society, as a lost waif, lodged in the river grass on the shores of the Neuse River, near Newbern, North Carolina.

Another important one-man paring or surfacing tool, to be classed rather with the plane than the broad axe and adze, was and still is the straight, steel blade, handled at right angles, at both ends, called the

DRAW KNIFE (Fig. 94)

also used in other trades (cooper, wheelwright, etc.,) and noted as "Shave," "Draft Shave," "Round Shave," "Hollow Shave," and "Shaving Knife," in the old New England Records (*Essex Probate Records*, 1635 to 1681). It was used in 1678, says Moxon, to round-shave ladder rungs, tool handles, etc., when the latter were held between the workman's breast and the bench or, as later evidence shows, on the Tool Handle Clamp (Fig. 75), but more universally to shave thin the tops and sides of riven shingles when the split pieces were gripped by pressure of a foot lever, in the Shaving Horse (Fig. 15).

As a variety of the Draw Knife the

ROUND SHAVE OR SCORPER (Fig. 95)

a one handled circular iron knife, here shown, was used not only by coopers for shaving to a level the joints between freshly set staves inside tubs, etc., but also by farmer artificers one hundred years ago for excavating the concave surfaces of home-made wooden bowls, butter ladles, etc.

Still another tool, too rare to be very significant, in the form of a funnel-shaped cylinder, knife-edged on its top rim, is here shown as the

PEG CUTTER (Fig. 96)

used for perfecting pegs and treenails, driven down through its sharpened, circular orifice, while the

WITCHET OR ROUNDING PLANE (Fig. 97)

which has two blades projecting into an orifice, expansible on hand screws, is used to round-shave a stick into a tool handle. The draw knife in more regulated form appears as the

SPOKE SHAVE (Fig. 98)

in which the blade no longer works free but is reduced to a narrow cutter set in a narrow slit or mouth, which restricts the depth of the cut and regulates the thickness of the shaving. This latter tool, which has ceased to be a draw

Fig. 92.—Cooper's Adzes

These small, one-hand adzes, used by coopers for hewing down barrel staves, show the characteristic, curved, transversely set, single (rarely double, No. 940) bit and pounding poll of the two-handed carpenter's tools, shown in Figure 89, but differ from the latter in the following particulars: (*a*) their bits are more curved; (*b*) their cutting edges generally basilled on the inside; but sometimes on the outside and sometimes flat, are often saucered far more conspicuously than on the other tool; (*c*) their eyes are not wedge-shaped inside and hence their handles are not releasable by updriving, and would be always in the way for sharpening the inner basil on the grindstone. If saucered and so basilled, the blade would have to be sharpened on a file, or the whetstone, or one of the oil-stone strips mentioned by Holtzapffel, Vol. 3, p. 1138.

The evidence shows that the tools were widely adopted by the pioneer carpenter and farmer in the 17th and 18th centuries, for hollowing large bowls, bread troughs, dug out canoes, gum tree boxes, bee hives, etc. As here illustrated, the specimens, including the exceptional polless No. 10706, are old Bucks Co., Pa., farm, mill and shop relics.

knife, may be said to form an intermediate link between the open blade driven by percussion (*i.e.* broad axe), and another celebrated instrument far more commonly associated in the popular mind with the carpenter, yet the most delicate, varied, complex and difficult to work, of all his tools, namely

The Plane

the *Runcina* of the Romans. It is a wooden, rectangular block, called the *stock*, perforated by a central, upward-expanding slit, through which the flat, steel, basil-edged blade called the *iron*, is inserted downward at an angle and tightened with a thin wedge, notched for the upward escape of

shavings. The iron projects through the lower orifice of the slot, called the *mouth*, a little below the bottom of the stock, called the *sole*. The *fore end* of the plane or stock, is that in which the handle, called the *tote*, is inserted and towards which the top of the blade leans. The *britch* is the other end of the stock, away from the carpenter, when grasping the *tote* with his right hand, he pushes forward the instrument.

Who has ever fully described this ancient tool, in its 18th century varieties? Owing to the confusing and non-descriptive names given to it, it is hard to understand until we overlook the endless variations in its make and shape and grasp the three purposes of its construction, as devoted, first, to *levelling*; second, to *fitting*, *i.e.*, cutting the important rectangular-notched channels and ridges, called "rabbets," or "rebates," needed to fit pieces of wood together; and third, to *ornamenting*, *i.e.*, making decorative mouldings.

The first of these purposes is served by the so-called "bench planes," of which there still are, and for at least three hundred years, have been, three kinds; namely, the so-called jack planes, trying planes, and finishing planes.

The Jack Plane or Fore Plane (Fig. 99)

used, not for smoothing but for preliminary rough surfacing, superficially resembles all the other bench planes but differs noticeably from them all, in the curvature of its steel blade. This blade, the so-called "iron," usually mitred or basilled like a chisel on the underside of the cutting edge, and set rank, *i.e.*, projecting farther than usual below the sole, so as to cut deep and quick, unlike all other bench plane "irons," is slightly convexed, so

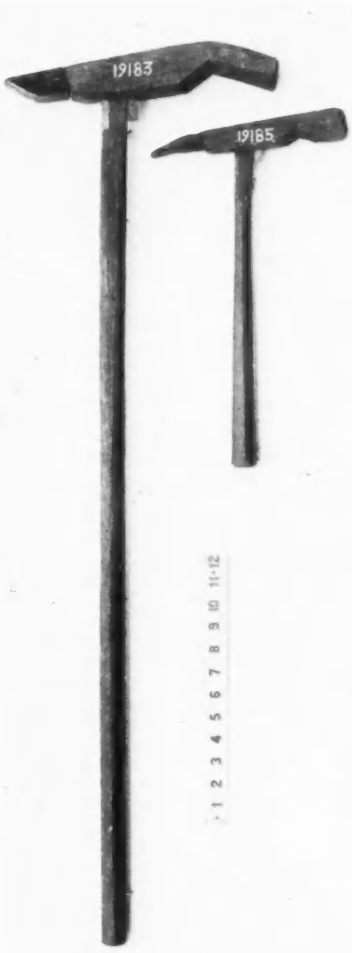


Fig. 93.—The Korean Adze

The Korean adzes here shown are of great comparative interest, as coming recently from one of the most conservative countries of the world. The Far Eastern tool is represented by a two-hand large, and one-hand smaller example, which except that the blades, invisibly in the photograph, widen transversely at the cutting edge in general shape and construction, resemble the American adze. Otherwise,

Fig. 94.—Draw Knife

A narrow steel blade basilled on its upper side (*i. e.*, away from the wood) with two wooden handles tanged upon it at right angles, pulled with both hands to thin the sides and tops of shingles held in the shaving horse (Fig. 15), or to round-off tool handles, wagon spokes, stool legs, ladder staves, etc., grasped for it in the vise. Much employed by coopers and in other trades, it is illustrated by Moxon as a carpenter's tool and called by him "Draw Knife." It appears in the Essex County (Mass.) Court Records from 1635 to 1681, frequently as "Draw Knife," "Drawing Knife," "Shave," "Draft Shave," "Shaving Knife," and when called "Round Shave," and "Hollow Shave," was probably used as a cooper's tool.

as to perceptibly trough-cut the surface, as is sometimes proved by the unfinished, rippled, under sides of old drawers, or the backs of cupboards.

The Trying Plane (Fig. 100)

is constructed for more perfect levelling ("shooting") of edges and smoothing of surfaces. This tool superficially resembles the jack plane, but its accurately-flat sole, 20 to 22 inches long, is longer and its blade is not convexed, but flat. Following the jack plane, it finally smoothes the surface of a board, laid flat on the work bench, against the catch (Fig. 69), or "shoots," *i. e.*, accurately levels, the edge of a board held upward in a vise. It varies

not only the handles, side-pegged for easy removal when sharpening the blades, but also the heads are of wood, into which the straight-edged, steel bits, basilled on the lower side as usual, are mortised, with a shoulder. The specimens were bought from a Korean carpenter, Kim Mok Sow, for six yen, in Kang Kei, Korea, in 1923, by the Rev. Clarence Hoffman.

Fig. 95.—The Round Shave or Scorper

Though these old home-made, one-handled, circular-bladed iron or steel knives, inserted on a tang at a right or obtuse angle, into short, wooden handles, are not illustrated in Diderot (under *Boisellier* or *Tonellier*), the evidence gathered by the writer with many collected specimens, proves that like one of them (No. 14225 not shown) bought from J. & W. R. Wing, of New Bedford, Mass. (with an outfit of cooper's tools belonging to one of their whale ships), they were used by coopers to reach down into barrels, buckets, tubs, etc., and shave level the joints between the staves. For this purpose Diderot illustrates a similar, open-sided, one-handled, semi-circular knife, not shown here.

According to the information of Matthias Hall, of Wrightstown, Bucks Co., Pa., who gave another specimen to the Museum, these circular-bladed knives were also used by farmers, sixty years ago, to cut the concave surfaces of home-made, solid, wooden bowls, butter ladles, etc. Knight figures Diderot's semi-circular knife, calls it a "Scorper" and says it was also thus used to hollow bowls and ladles. In the double-handled, draw knife form, the tool, now factory made and on sale at hardware stores, is universally used in mercantile transport for erasing paint, addresses, etc., on packing boxes and barrel heads.

in fineness and angle of blade and in size, but its construction, accounting for its purpose, *i.e.*, final smoothing, is always the same. The irons in the old specimens seen by the writer are all set at right angles to the sole, and in the two examples here shown (left), are single, and in the two right-hand specimens doubled, *i.e.*, a duplicate blade, with reversed basil, is screw-bolted through a slot upon the cutting blade just above its edge. This device, to quicken the upcurl of shavings, unknown in the 18th century but now universal on bench planes, was introduced in England, according to Charles Holtzapffel, early in the 19th century.

The next illustration

Varieties of the Trying Plane (Fig. 101)

illustrates long examples of the same instrument, which by reason of their varying lengths have special names, *i.e.*, according to Holtzapffel, common

Fig. 96.—Peg Cutter

Two slightly funnelled iron cylinders, the sharpened top rims of which form circular knives, are set over two holes penetrating a heavy wooden block standing on pegged legs. When slips of wood, rough-rounded to approximate size, are driven down and punched through the cylinders, they fall through the block as rake teeth. Mrs. Jacob Hahnn of Point Pleasant, now about 82 years old, remembers seeing a similar but larger apparatus, employed in a neighboring wood, in 1846, to make the large trenails, illustrated and described later, used by the hundreds in building the wooden covered bridge over the Tohicken Creek, at Point Pleasant, Bucks Co., Pa. (Information of Mrs. Dr. William R. Cooper of Point Pleasant, to the writer, August, 1925.)

trying plane 20 to 22 inches, long plane 24 to 26 inches, jointer, for smoothing to close-fit board edges, 28 to 30 inches. We learn also that the adjustable blades, released by hammering either the britch, or the front sole-top, are, by means of their wedges, set "rank" or fine, *i.e.*, so as to project more or less below the sole, and therefore cut deep or shallow, and also, from Holtzapffel, that they are pitched at varying angles called "common pitch," at 45 degrees, for soft woods, "York pitch," 50 degrees and "middle pitch," 55 degrees, for mahogany, and hard woods; also, that they are sometimes set perpendicularly or with a forward tilt, for boxwood, etc., in which latter case the plane is called a scraping plane. Moxon mentions and illustrates (Fig. 67.B.3) a short variety of the trying plane,

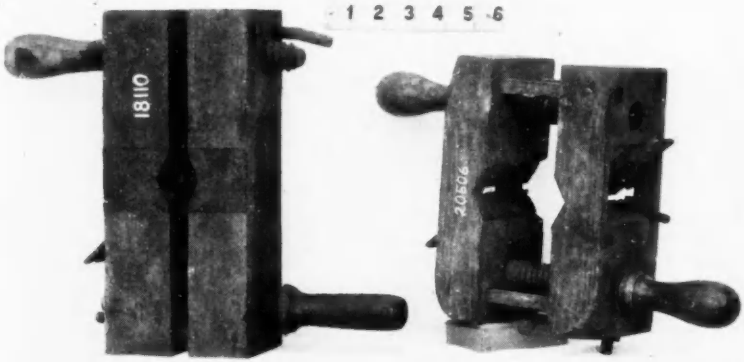


Fig. 97.—The Witchet or Rounding Plane

In this instrument (right), two plane stocks, bladed as usual, and with notched soles, are set adjustably sole to sole, on hand screws. When a rough-rounded stick, clamped in a vise, is thrust through the rectangular orifice between the stocks, and the stocks are tightened upon it and twisted around it by the handles, the opposed, plane blades, protruding from the notches, round-shave the stick into a tool handle, etc. One blade in only one of the stocks does the same work in the left-hand instrument.

called the "strike block," for smoothing at short quarters, and often when used for mitre edges in framing, worked upside down, in which case the workman held the little plane in his left hand, fore-end towards him, and pushed the mitred edge along its upturned blade.

Besides this Holtzapffel briefly describes, as used in 1846, a method for working a trying plane sideways along an apparatus called a shooting board, or shooting block, first dated in the *New English Dictionary*, by a quotation for 1812, and described in improved form, by Knight, in 1878. It consists of a straight-edged board mounted on a side channel in which the plane when held sideways slides (so as to clear said channel with its blade). The apparatus was variously blocked or tilted to permit the plane, thus fenced, to straight-edge or bevel longways, or cross-edge or mitre the wooden strips worked upon.

All the plane handles shown in Figure 101 show the hollow grasp, not illustrated by Moxon or Diderot, nor found by the writer in ancient pictures, and apparently unknown before the later 18th century, soon after which it appears in an illustration from the *Circle of Mechanical Arts*, by Thomas Martin, London, 1813.

A still longer variety of the trying plane is

The Floor Plane (Fig. 102)

conspicuous for its extra length (here about three feet) and used especially for the surface-levelling of floors, thus exceeding the ordinary length of the longest common bench plane, which, according to Holtzapffel, was thirty inches. But the floor plane

Fig. 98.—The Spoke Shave

A restricted draw knife used by carpenters for smoothing tool handles and by wheelwrights for wagon spokes, also variously, on barrel staves, by coopers. It is handled at both ends upon a short, straight or slightly curved stock. The shortened blade is adjustably stapled or thumb screwed so as to project very slightly below the wooden, or metal-faced sole of the instrument, which thus halts the cut while the shavings escape into a widened orifice under the blade. The depth of the cut is increased by twisting the thumb screws or pounding the projecting staple ends, to raise the knife. In No. 9053, made after 1846, as proved by its pointed wood screws, the blade takes the form of a plane iron, wedged through a slot in the stock as described with the witchet (Fig. 97). Moxon does not mention the ancient tool but it is named in an old Salem inventory of 1644 in the *Essex County Probate Records*, and in the vast lore of quotations in the *New English Dictionary*, in references cited for 1510, 1572, 1688, 1794, 1837, and 1846.

dwindles into insignificance in contrast with the great cooper's plane called

THE COOPER'S LONG JOINTER (Fig. 103)

worked upside down and here shown for comparison, from a specimen in the Museum of the Bucks County Historical Society at Doylestown, Pa.

The little known tool seems well worth illustrating again as

THE COOPER'S LONG JOINTER OF THE 16th CENTURY (Fig. 104)

from one of the old German woodcuts of 1568 by the engraver Jost Amman (born 1539, died 1591), picturing workmen at work in the various trades.

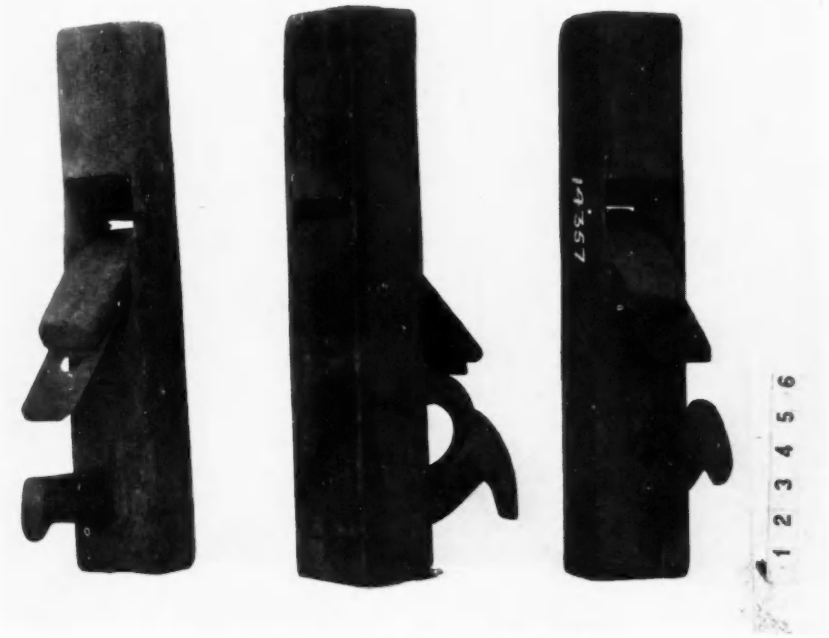


Fig. 99.—The Jack Plane or Fore Plane

The first, so-called "bench plane" used by the carpenter. The basilled blade, unlike that of all other bench planes, is slightly convex-edged for quick, preliminary levelling. In the right-hand specimen the "iron" (blade), in ancient pre-19th century style (described under Fig. 100), is single; in the other two specimens (left), double. The hollow-grasp handle only appears in the middle plane.

To complete the list of so-called bench planes, the next illustration shows

THE SMOOTHING PLANE (Fig. 105)

This little, boat-shaped block plane, poorly named "smoothing plane," is and was used, not like the trying plane to smoothlevel boards, but to wriggle about into corners, over ill-fitted joints, etc., and so put the last levelling touch upon *finished* work.

In No. 445 which may be called a scraping plane as above described, the iron is set almost vertically for planing over hardwood, like apple or box, and rather scrapes than planes the wood. When used in Colonial America these little instruments were grasped in the workman's hands, without handles. But as an exception, No. 12799 is equipped with a handle, called the *horn*, at the fore-end of the stock. Moxon's "smoothing plane" (Fig. 67), shows no such grasp, but smoothing planes, thus "horned," have long been in use in Continental Europe, as is shown by the

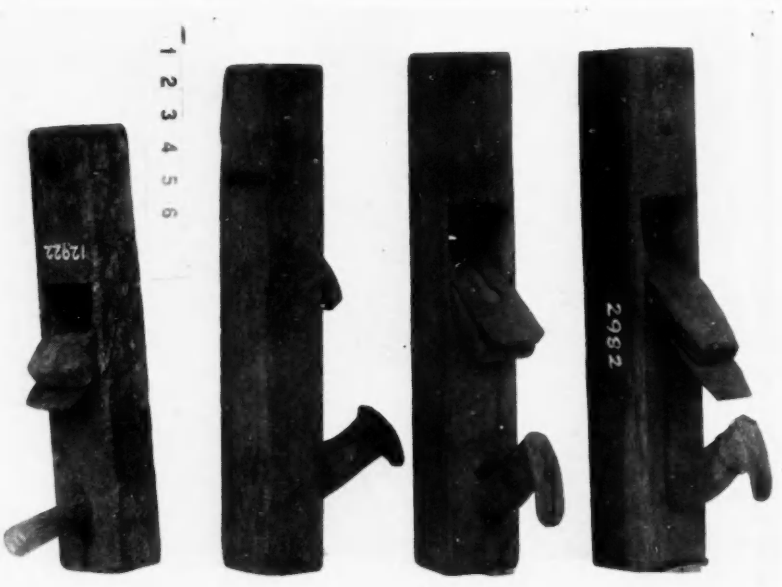


Fig. 100.—The Trying Plane

The second bench plane used by the carpenter. Longer than the jack plane, with flat sole and flat-blade edge for more perfect smoothing. None of these old, home-made specimens show the hollow grasp. Two of them (left) have single "irons" (blades) in pre-19th century style, as noted in the text. The other two (right) are double-ironed, *i.e.*, equipped each with a double "iron" or blade, basilled in reverse. A bolt headed rigidly in the latter, penetrating a long slot in the lower or cutting iron is tightened flat and upside down by a threaded nut, upon the said lower, cutting iron, just above its blade, to help the upcurl of shavings. Extra notches in the wooden wedge above, and plane stock below, clear the bolt head and bolt nut.

Smoothing Plane of 1596 (Fig. 106) here illustrated from a relic of the ill-fated Dutch expedition sent to Nova Zembla, in 1596. After two hundred and fifty years, it was recovered and brought back to the Rijks Museum, at Amsterdam, in 1871.

Let us pause here to follow this smallest of bench planes farther back into the past, and wonder whether acting also as the jack plane, it did not serve the carpenter of the Middle Ages, for most purposes, whether he used the trying plane at all, and why Albert Dürer, in 1514, chose to represent this little instrument as the type of its class, in his celebrated engraving known as

The Melancholia (Fig. 107)

There we see it plainly, horn and all. It lies in the foreground of the great masterpiece, along with the open handsaw of its day, the carpenter's rule, some wrought nails, and a very remarkable claw hammer, to be described later, among the tools thrown down for a moment by the Genius which "by searching" has failed to "find out God."

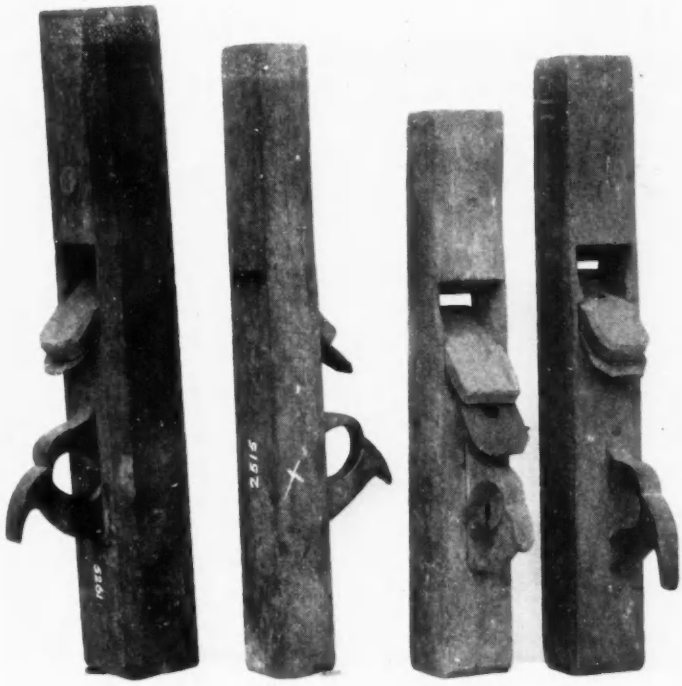


Fig. 101.—Varieties of the Trying Plane

Still longer than the common trying plane, (No. 5261, 26 inches, No. 2515, 24½ inches long) hence adapted for still truer levelling and edging of boards. All the specimens show the hollow grasp, "tote" or handle; probably not earlier than the mid-18th century. The irons are all doubled in post-19th century style, as noted in the text.

In connection with these and other carpenters' planes, described later, we may suppose that the "planes" frequently mentioned in the *Essex County Mass. Probate Records* (1635 to 1681), were sometimes homemade, of stocks cut by the carpenter himself, and mounted with "irons" forged by local blacksmiths, and sometimes bought ready-made from cutlers or tool-makers; also, that they were sometimes made in Massachusetts, and sometimes brought from England.

The evidence of planes used in the late 18th and early 19th centuries, seen by the writer, also shows that some of the latter were thus homemade, while many others, toward the middle of the 19th century, show the names of makers or early factories stamped on the stock, or having smith stamps on the blade, often with the added words "cast steel" (first made in the United States, in 1850-1859, according to J. M. Swank *Iron and Coal in Pennsylvania*, 1878, p. 80.)

J. L. Bishop in his *History of American Manufactures*, Philadelphia, 1864, Vol. I, p. 568, refers to "one cutler" and tool-maker in Pittsburgh in 1808; the "Lemnos edge" tool factory in Chambersburg, Penna., in 1828; and the Lamson and Goodnow Cutlery works, near Springfield, Mass., in 1842-44. He also says in a unique hardware list (Vol. 2, p. 387), that he learns from John W. Quincy of Boston and Mr. Hand of Philadelphia, that American hardware, including carpenters' planes, first imported from England in the early 19th century, began to be manufactured and extensively sold in the United States, between 1829 and 1834.

Fig. 102.—The Floor Plane

These extra long planes, the longer of which is 34¾ inches long, and hence longer than the longest of the carpenters trying planes (30 inches) listed by Holtzapffel, were used possibly for special accurate "trying" *i.e.*, straight edging of framework, but chiefly, as old carpenters say, for the surface levelling of floors.

Fig. 103.—Cooper's Long Jointer Plane

The chief feature of this longest of planes, which in construction exactly resembles a common carpenter's trying plane, except that it lacks a handle, is its extraordinary length (here 5 feet 6 inches long) and the fact that unlike all carpenters' planes, it is always used upside down.

The framed legs, socketed loosely into a mortise in one end, elevate the britch of the plane towards the workman, thus enabling him to smooth-edge a barrel-stave, which he slides downward over the blade of the upturned sole. An underplaced block lifting the instrument at the lower end would extend the range of his push. The mouth is wide and the blade, basilled as usual, is not convex-sharpened but flat edged, not slotted to bolt

Fig. 104.—Cooper's Long Jointer Plane of the 16th Century

An old German cooper of the 16th century is using his long jointer plane as described under Figure 103. The lower end of the plane rests on a block thus extending its range. Below it lies a wooden compass with a stop arm (Fig. 59B), while in the background another cooper releases a barrel hoop with the lever hook, resembling the cant hook, Figure 39, No. 6387. From a wood cut by the German engraver, Jost Amman, b. 1539, d. 1591.

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upon a reversed double blade, as in modern carpenter's bench planes, but single.

The specimen here shown with stock of very heavy wood had been made and used by a maker of turpentine barrels for turpentine gatherers, and was bought by Dr. Wm. S. Erdman, from J. H. McGhee, of Cumberland, N. C., in December, 1923.

Charles Holtzapffel says in 1843 (*Turning and Mechanical Exercises*, Vol. 2, page 483), that the Chinese were then using planes like this for a purpose which he does not specify.

Fig. 105.—The Smoothing Plane

The last bench plane used by the carpenter, not for smoothing the raw material (boards) but to put the last levelling touch across ill-fitted joints, etc., on finished work. No. 12799 is equipped with a Continental European handle, called the *horn*, at the fore end of the stock, as in Fig. 106, and in Dürer's *Melancholia*, of 1514 (Fig. 107). The other instruments were clasped in the workman's hands, minus handles. The iron stands up almost vertically in No. 445, for planing hard woods.

In general, as to the angle or rake of plane irons adapted to soft or hard or ill-grained woods, Holtzapffel, *Turning and Mechanical Manipulations*, Vol. 2, p. 482, notes, for bench planes, *common pitch*, 45 degrees from the horizontal, for soft woods; *York pitch*, 50 degrees, for mahogany and hard or stringy woods; *middle pitch*, 55 degrees, for moulding planes for soft wood, and for finishing planes for mahogany, etc.; and *half pitch*, 60 degrees, for moulding planes, for mahogany and ill-grained woods, such as bird's-eye-maple.

Fig. 106.—The Smoothing Plane of 1596

The little stock, lacking its original blade and wedge, is not coffin-or boat-shaped, but rectangular, and like many of the Continental European instruments now in use, and seen in old pictures, has a handle, the so-called "horn," at its far end. The instrument is a relic of the Dutch Expedition to Nova Zembla in 1596. It was found in an ancient store of implements then left on the island and brought back to the Rijks Museum at Amsterdam. Photographed by the kind permission of the latter.

Fig. 107.—The "Melancholia" of Albert Dürer

In this famous picture of date *c.* 1514, the seated figure holds the metal compass (Fig. 59-A) in her right hand, while the horned smoothing plane (Fig. 105), the iron pincers, the rule, the open handsaw (as seen in the carpenter's belts in Fig. 32), four wrought nails, and the claw hammer with riveted eye-projection (to be described later) appear among the scattered tools.

(*To be continued*)

William Mumford, Stone Cutter

By Mrs. Harriette M. Forbes

WHO made the old slate gravestones of New England? Was the ornamentation carved in old England and were the stones sent here that some local workman might add the name, dates and other desired inscription? Or were they unloaded from the hold of the ship a finished product, ready for their chosen destination?

These are questions that have been occasionally asked but never satisfactorily answered. In the hope of throwing some light on these very interesting queries, I will suggest a few reasons for thinking that gravestones were not, as a rule, imported, even in the earliest years of New England's history, except in some unusual cases.

I. If imported they would have been handled by the merchants. I have discovered no early inventories which included them among the many things carried by the big variety stores of that day, although almost everything else needed for life or death does so appear. In one case, slate is one of the articles left by the deceased merchant, but this is not gravestones.

II. There is no early record of their having been purchased from a merchant, although as early as 1693, a stone cutter was paid for gravestones and earlier payments had been made to men of this trade of similar amounts, presumably for the same purpose.

III. None appear in the early lading of ships, although grindstones, tools and nearly all the necessaries of life are mentioned.

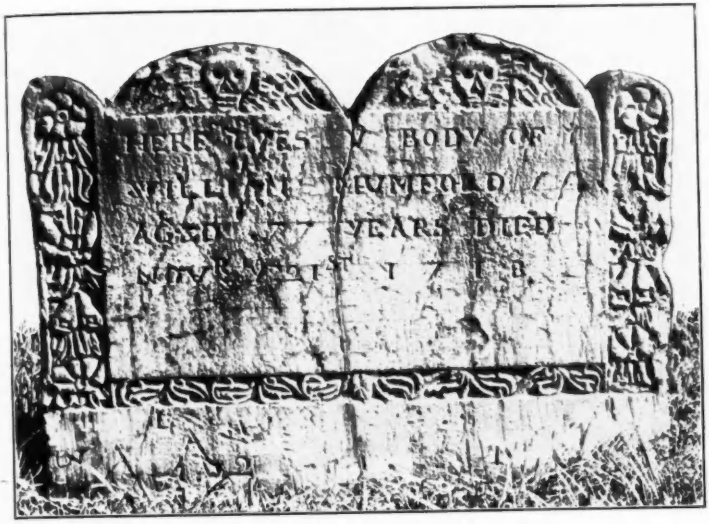
IV. The work recognized as that of one man is fairly closely confined to a certain locality although some of the better workers sold their wares quite far from home.

V. Such work also usually covers quite closely the period of the active life of a given stone cutter—a few examples being used after his death which probably were purchased from his heirs and lettered by some one else.

Why is there so little mention of stone cutters in the records before 1700? Because they often, perhaps usually, had some other trade and were called cordwainer, surveyor, carver, slater, mason and even mariner; gravestones being a by-product of their hands and brains, their avocation, the expression of their sense of beauty and fitness and not a simple matter of pounds and shillings.

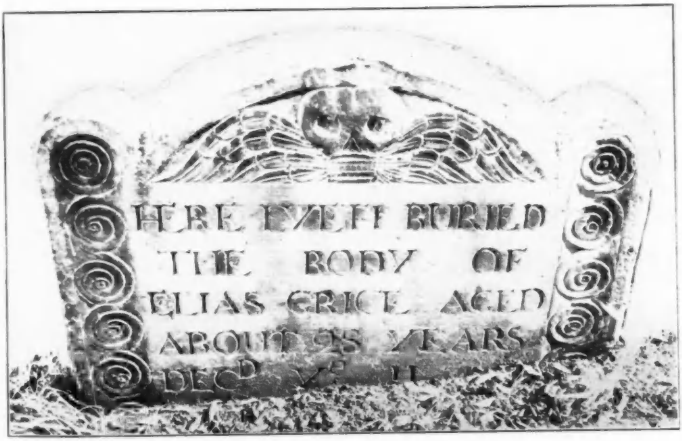
Undoubtedly in their day they received much commendation and admiration for a good piece of work and they must have expected that this appreciation would last as long as the stones themselves. Think how surprised they would have been could they have foreseen that the samplers on which their little daughters toiled would receive an earlier and more flattering reception into the realm of early American art, than their own more beautiful and more enduring achievements.

The 17th century stone cutters of Boston and immediate vicinity, as far as I have discovered their names from deeds, wills or other similar sources, are as follows:



Gravestone of William Mumford, 1718

COPP'S HILL BURYING GROUND, BOSTON



Gravestone of Elias Grice, 1684

William White of Boston, died 1673; called stone mason.

Henry Stevens of Boston, died 1690.

Elias Grice of Boston, died 1684; aged about twenty-eight.

William Mumford of Boston, died 1718.

William Parham of Boston, born in Boston, 1666; date of death unknown.

Richard Knight of Boston, called slater and carver, died before 1704.

Joseph Lamson of Charlestown, died 1722.

Thomas Welch of Charlestown, died about 1702.

Joseph Whittemore of Charlestown, born 1666/7.

And J. N., residence and dates unknown, who signed stones as early as 1700 and probably did earlier work.

Without doubt there were many others, but these will serve as a starting point in our search for the earliest Boston stone cutters.

Leaving the Charlestown stone cutters for future consideration and J. N. as probably not a resident of Boston, we have left a small group of only six men, one of whom, Elias Grice, died at the early age of twenty-eight and still sleeps in the Granary Burying Ground under a stone undoubtedly made by his old friend and partner, William Mumford.

William Mumford is easily the leader in this group; a man who not only carved gravestones but had no little influence in shaping the history of the new town of Boston. He first comes prominently to our notice in August of 1677, when a little band of Quakers were holding religious services at the North End, and were rudely interrupted in their worship, seized by the constables and whipped through the streets of Boston. Their names were kept in the annals of the Quakers and when Snow was writing his history of Boston, before 1825, "a venerable professor of the denomination" told him who these people were.

Some of them appear again in the history of the town. One of them was William Mumford, at that time thirty-six years old and perhaps already comfortably established in his chosen occupation.

The first mention of him seems to be in 1666 when Henry Shrimpton, brazier, of Boston leaves "my servant William Mumford," five pounds, "if then living with me." Probably he received this legacy, for the next year he bought a lot of land of William Lytherland and soon after married Ruth, possibly that Ruth, daughter of William Copp, born September 24, 1643, who is otherwise unaccounted for. By 1682, the Mumfords were living at the North End in an "old dwelling house which the said Mumford bought formerly of Jonathan Copp," brother of Ruth, and which, without much doubt, was William Copps' former home. This house was at Snow Hill (now known as Copp's Hill) near Prince Street and the house stood near the beach.

It is not known positively from what section of the Old Country William Mumford came to New England but a letter from a Quaker in Worcestershire would seem to indicate that he had lived in that county or had relatives there. The letter reads: "I am earnestly desired by a friend of mine in Worcestershire to Make Inquiry for one William Mumford a Stone Cutter in Boston whether he be living or not, that in thy next letter he may write a few lines and it may be attested by some that comes over in the next ship to end a law sute for one that holds an estate during his life."

William Mumford is mentioned in the various histories of Boston as the man who in 1694 bought a large lot of

Gravestone of Moses Draper, 1693

COPP'S HILL BURYING GROUND, BOSTON

Gravestone of Nicholas Chatwell, 1700

CHARTER STREET BURYING GROUND, SALEM

Gravestone of Capt. Samuel Ruggles, 1699
of Roxbury

Gravestone of Jeremiah Fitch, 1692

GRANARY BURYING GROUND, BOSTON

Gravestone of John Kneeland of Roxbury

Gravestone of Mary Mumford, 1688 daughter of William Mumford

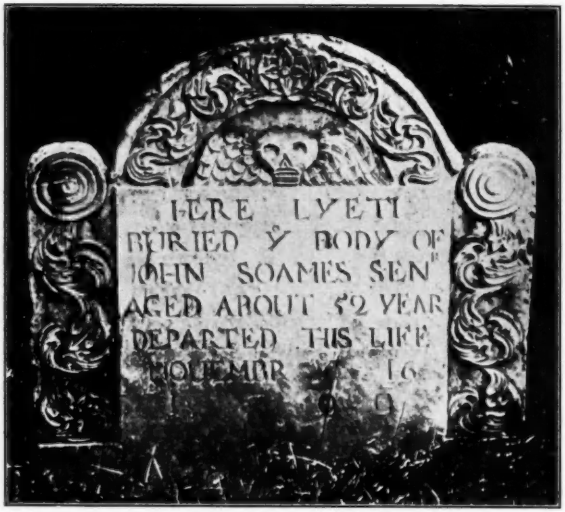
COPP'S HILL BURYING GROUND, BOSTON

land in Brattle Close and built a small brick church for the Quakers, and again, in 1708, when they had outgrown this building, he bought another lot of land on Congress Street where he erected another house of worship for them and established a burying ground which remained in use until 1828.

He was also one of the proprietors of the town of Sutton, the only one apparently whose name is still kept alive in that vicinity by Mumford river which flows southerly to Douglas, and also in Mumford street, which runs near the river.

As making gravestones in those days was not a very lucrative employment, William Mumford added to his livelihood by being a mason and slater.

Almost the only available source of information in regard to the early



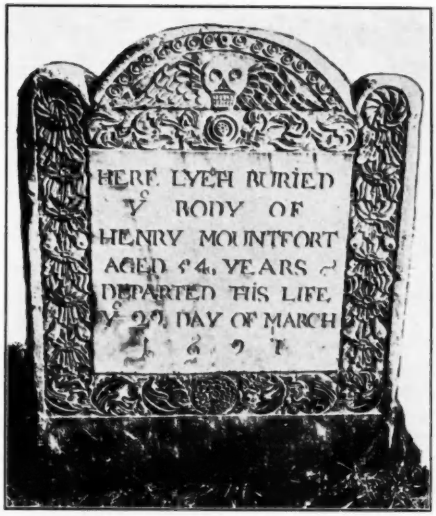
Gravestone of John Soames, Sen., 1700
COPP'S HILL BURYING GROUND, BOSTON

carvers of gravestones are the probate records. Unfortunately the very early ones are much less full than they were later; "debts due from the estate" covering so many items which might be of great interest. In those of Suffolk County, during Mumford's lifetime, I have found his name among the creditors of estates sixteen times, in nine of which it is expressly stated that the bill due was for gravestones. It is not until 1717 that we find any other person paid for them and then a young man named Nathaniel Emmes receives such a payment.

A few of the stones for which William Mumford was paid are still standing, a valuable key to his work. For the modest stone of Moses Draper, 1693, he was paid one pound; "that very hopeful young man," according to Sewall, who was one of the earliest victims of that first terrible visit of yellow fever to the new town of Boston. This is still to be seen on Copp's Hill.

In 1700, Nicholas Chatwell of Salem died and "Mr. Mumford" was paid 24 shillings by his estate, probably for the stone still standing in the Charter Street Burying Ground. In the Granary Burying Ground in Boston, is a fragment of a gravestone placed to mark the grave of Jeremiah Fitch who had furnished gloves for many a splendid funeral in Boston and who died in 1692, his estate paying William Mumford two pounds five shillings probably for the stone.

In Roxbury there are two other stones which are doubtless his work, one of them erected to the memory of Samuel Ruggles who died in 1699. An item in the settlement of his estate reads "To Mr. Mumford, Stone Cutter. 1.0.0." The other is a rather poor little stone with a border quite unlike



Gravestone of Henry Mountfort, 1691

GRANARY BURYING GROUND, BOSTON

Gravestone of Nathaniel Greenwood, 1684

COPP'S HILL BURYING GROUND, BOSTON

Gravestone of John Farnum, Sen., 1701

COPP'S HILL BURYING GROUND, BOSTON

Gravestone of Andrew Neal, 1684

GRANARY BURYING GROUND, BOSTON

Gravestone of Joseph Tapping, 1678

KING'S CHAPEL BURYING GROUND, BOSTON

those other specimens of his work,—that of John Kneeland, for which his dutiful son John paid "To two pair of gravestones for Father, Mother and sister, of William Mumford 2.0.0." The other headstone is gone and the footstone shows only lettering.

In all, five stones out of sixteen which we might have found, a rather good proportion to last over two hundred and fifty years. From these five stones we can learn something of Mumford's style of work, even though we feel sure that he, like the majority of artisans of his day, employed apprentices whose work would not be equal to his own.

Their points in common are; the use of the death symbol which was almost universal, but carved by him with a rather round head, large round eyes with no eyebrows, the teeth usually meeting squarely not alternating, yet slightly protruding, an almost straight line above and below them and a triangular nose with only one inner line. And perhaps more distinctive than any other feature is the expression which his death symbol wears, cheerful and serene, looking at the passer-by with untroubled vision and calm content.

All, except the inferior stone of John Kneeland, have borders at the sides of

Gravestone of Matthew Pittom, 1694
GRANARY BURYING GROUND, BOSTON

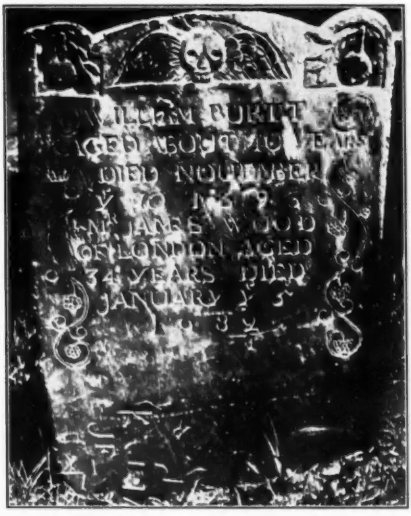
pomegranates and figs suggestive of the "land of wheat and barley and vines and fig-trees and pomegranates," and of the carved pillars of Solomon's Temple about which the good people of that day loved to read.

It is quite fair to conclude that William Mumford made the stone for John Soames, Copp's Hill, 1700, not only from the evidence of the workmanship but because John Soames was so closely associated with him both as a fellow sufferer in the whipping of 1677 and also as a most important member of the Quaker Church.

From the broken stone of Jeremiah Fitch we learn that Mumford sometimes put leaves or scroll work above the lettering and we find many stones which may have been his work where this is done—as the stone of Nathaniel Greenwood, Copp's Hill, 1684, and Henry Mountfort, Granary, 1691.

Andrew Neal, Granary, 1684, is also in the same style, while John Farnum, Copp's Hill, 1701, is slightly different from any of these others but has over the top a little border of scrolls very similar to that on little Mary Mumford's stone Copp's Hill, 1687/8.

There is a style of gravestone which we find in Boston and immediate vicinity which we might call the Urn and Mermaid. These were made from 1682 to 1711, with one example, at least, of a slightly later date which was evidently done by a different worker. I have found no instance in which these stones were paid for by an estate and can only guess that they were made by William Mumford. One of the persons for whom this design was made was Matthew Pittom, a son of John Pittom who was closely associated with Mum-



Gravestone of William Burtt, 1693
GRANARY BURYING GROUND, BOSTON

ford in the original purchase and founding of the town of Sutton. On the back of this stone is cut the record of the deaths of John and his wife.

I have not yet succeeded in identifying the work of the other five Boston men of the 17th century, although it is easy to recognize that done by several different individuals.

There was old Bulging Head, waiting for a better name, with his scallop shells and queer shaped death symbols. I have found his work in many an old burying ground around Boston. A good example of it is the stone of Joseph Tapping, "One of the most noted shop keepers in Boston," according to Sewall, whose lamp of life was extinguished in 1678, in spite of Father Time's endeavor to stay Death's hand.

And then there was the Grape Man, who loved little vines although he couldn't do them very well, he did remember and recall to others that the Angel of the Revelation was "to thrust in her sharp sickle and gather the clusters of the vine of the earth; for her grapes are fully ripe." And once, on the stone of William Burtt, in the Granary, 1693, he added an apple in each corner. On the lower part of the stone he cut the letters J. F.—perhaps his initials; probably he was just trying his tools.

William Mumford died in 1718 and although a Quaker and the founder of the Quaker Church and Burying Ground in Boston, he was buried on Copp's Hill surrounded by many of his old friends and neighbors and the stones he had made for them.

His own stone, unlike all known specimens of his work, is of Connecticut sandstone, badly worn yet still legible and possibly done by him.

Fort Shantok

Another State Park for Connecticut

LARGELY as the result of the efforts of Mr. Arthur L. Peale and the Norwich Chamber of Commerce, Connecticut is to have another state park, which will be the first to be located in New London County. An historical site is to be preserved sacred to the memory of the friendly Indians of colonial days and as a place of recreation for the people.

Last year a committee of the Norwich Chamber of Commerce made several trips to Hartford in the interests of the park. The members of the State Park Commission viewed the site and were highly impressed with its beautiful outlook and historical value.

An appropriation to purchase the site was made during the last session of the legislature, but improvements will have to wait on further appropriations.

The following account of Fort Shantok is based largely on a brief circular prepared by Mr. Peale.

In southeastern Connecticut in the town of Montville, and close to the Central Vermont Railroad's flag station Mohegan, is found the site of Shantok, one of the principal forts of the Mohegan Indians. It is about three and one-half miles below the Yantic and Shetucket rivers on the west bank of the Thames, and the choice of this site was probably dictated by the proximity of an unfailing spring of clear water. The known history of the Fort begins in 1643 when shortly after the battle at the "Great Plains" where the Mohegans defeated the Narragansetts the last-named tribe under Pessacus attacked Uncas at Shantok and laid seige to his fort.

In 1657 another attack was made on this fort by the Narragansetts and Niantics, assisted by the Pocomtocks and Norwootucks, two tribes from Massachusetts, but they were repulsed.

In 1659 the Tunxis, Pocomtocks and Narragansetts again attacked the Mohegans at this place, and during the same year the Narragansetts were defeated here by their adversaries the Mohegans. Roger Williams in one of his letters in 1660 writes as follows, in referring to one of the Indian battles at this fort: "The Monheggins would not sallie, and the Nanheggs would not spoil the corn for feare of offending the English."

During the Queen Anne, French and Indian, and King Philip Wars the Mohegans were the faithful allies of Connecticut Colony. At the close of these great struggles this tribe had many widows and orphans left by those of its warriors who lost their lives while fighting.

In the Revolutionary War seventeen or eighteen of this tribe were killed or died in the service of this country.

In 1898 the Connecticut Society of Colonial Dames of America erected on the edge of a high bank a cone-shaped pile of stones, suggesting by its form an Indian wigwam, to mark the spot to which Lieutenant Thomas Leffingwell brought supplies to the Mohegans when they were besieged at Fort Shantok. As frequent rains threatened to undermine the cairn as placed, it was later taken down and re-erected a few rods away at the "old burying ground" of the Mohegans.

Many tourists annually visit the site of the fort, the Dames' cairn, and the "old burying ground."